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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/994,642	12/19/97	YANAI	T 35.C12444
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005514 WM02/1003  
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NEW YORK NY 10112

EXAMINER

TILLERY, R

ART UNIT

PAPER NUMBER

2612

18

DATE MAILED: 10/03/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**

Application No.

08/994,642

Applicant(s)

YANAI ET AL.

Examiner

Rashawn N Tillery

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9-17-01.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10,13-26 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) 11,12,27 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,4,6,8,10,14,16,18,20,22,24,26,30,32 and 34 is/are allowed.
- 6) ☒ Claim(s) 3,5,7,9,13,15,17,19,21,23,25,29,31,33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Continued Prosecution Application*

The request filed on September 17, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/994642 is acceptable and a CPA has been established. An action on the CPA follows.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 3, 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 29, 31, 33 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Udagawa et al (US5880781) in view of Tanaka et al.

Regarding claim 3, Udagawa discloses an image pickup device comprising color filters arrays (see figure 1), a plurality of pixels (see figure 6, PD), a plurality of vertical read-out units (see figure 6, V-CCD), a horizontal read-out unit (see figure 6, H-CCD), an output unit (see figure 6, Output Amplifier) and control means (see figures 13A-G; also, see col. 5, lines 36-65 where the color difference signals are discussed).

Udagawa does not explicitly disclose the control means as claimed; however, as an obvious variation to Udagawa's control means, Tanaka discloses, in figure 1, a control unit arranged to divide the plurality of pixels on a unit basis of a predetermined number of lines which includes a plurality of first lines and to add the signals of pixels of the plurality of second lines in order to control pixels of the predetermined number of lines so as to generate one kind of color difference signal (see "2. CONVENTIONAL COLOR CODING METHOD," where the color difference signals- R-Y and B-Y- are discussed). It would have been obvious to one of ordinary skill in the art to implement Tanaka's teachings. One would have been motivated to do so in effort to generate a more complete color difference signal.

Regarding claim 5, Udagawa discloses the signal charges of two predetermined pixels being added and an image signal corresponding to the added signal charges being outputted from the output unit (see col. 5, lines 36-42).

Regarding claim 7, Udagawa does not explicitly disclose taking added signal charges and further adding them with signal charges in the diagonal direction. Tanaka reveals that it is well known to add signal charges in the diagonal direction (see figure 5). Therefore, it would have been obvious to one of ordinary skill in the art to utilize Tanaka's teachings. One would have been motivated to do so in effort to obtain a more accurate picture and thus, produce a high quality image.

Regarding claim 9, Udagawa does not explicitly disclose combining a method of adding signal charges in the vertical direction and further adding them with signal charges in the diagonal direction and further adding signal charges in the vertical

direction. Tanaka reveals that it is well known to combine added charges in the vertical and diagonal directions and further add charges in the vertical direction (see Fig. 1 where the added combinations of, "(Mg + Ye)," in the vertical direction and, "(G + Cy)," in the diagonal direction are further added to signal charges in the vertical direction, "(G + Ye)"). Therefore, it would have been obvious to one of ordinary skill in the art to utilize Tanaka's teachings. One would have been motivated to do so in effort to obtain a composite image signal and thus, produce a high quality image.

Regarding claim 13, Udagawa discloses the combination of two predetermined pixels of yellow and green and cyan and magenta (see figures 13A-D).

Regarding claims 15 and 17, see claim 13 above.

Regarding claims 19, 21 and 29 Udagawa discloses electrodes connected to every fourth pixel in a vertical direction (see figure 2A where a four-phase driver to control the read-out of signal charges from the pixels to the vertical charge units is shown).

Regarding claims 23, 25, 31 and 33 Udagawa discloses electrodes connected to every fourth pixel in a vertical direction (see figure 2A where a four-phase driver to control the read-out of signal charges from the pixels to the vertical charge units is shown).

Regarding claim 35, Udagawa discloses an image pickup device where the control means effects the control of the pixels so as to generate alternately different kinds of color difference signals on the predetermined number of lines basis (see col. 5, lines 59-65 where the color difference signals are discussed).

Art Unit: 2612

Regarding claim 36, Udagawa does not explicitly disclose a signal processing circuit which subjects the signals output from the output unit to an image processing and an image display unit. However, it would have been obvious to one of ordinary skill in the art to implement a processing and display unit in effort to view pictures and thus, produce high quality images.

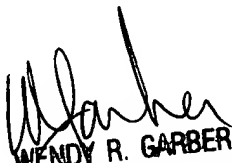
3. Claims 1, 2, 4, 6, 8, 10, 14, 16, 18, 20, 22, 24, 26, 30, 32 and 34 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5359 for regular communications and 703-308-5359 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0198.

RNT  
October 1, 2001

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600